

Kulic

Madison, Wis  
March 5, 1957

### TENTATIVE LECTURE SCHEDULE

1. What is genetics? Hypotheses of clonal stability
2. Mutational change. Preadaptation.
3. Measurement of mutation rates. Spontaneous mutation
4. Physical and chemical mutagenesis.
5. Methods of biochemical genetics.
6. Population dynamics. Periodic selection. R-S variation.
7. Sexual recombination.
8. ditto
9. ditto
10. Transduction by DNA (~~pharmococcus~~ transformation)
11. Transduction by phage: Salmonella
12. Transduction by phage: Prophage-linked transduction
13. Lysogeny: lysogenic conversion; inheritance of prophage
14. Genetics of Drug-Resistance
15. Genetics of serotype (esp. Salmonella H antigens)
16. Recapitulation.

#### ----- Additional lectures

(May be required in course but will also be designed

for a larger group if interested) Please plan for

later in the term, as they will  
have to be planned carefully.

17. Infection and heredity: plasmids
  18. Geometrical chemistry: DNA, recons and cistrons.  
(Genetic)
  - ? 19. Origin of viruses— how about a panel with Sir Mac' on this one? \*
  20. Biogenesis --- the origin of life and how to recognize it when it happens.
- As concerns the lab. course, Esther would like to suit your own convenience as far as possible. She is agreeable to any four week block; the July 1-22 being perhaps the most suitable. In that length of time, and with any number of students, it will be difficult to go very far. We would suggest an additional honors program, to last the duration of our stay, for a few students who would like to do a more thorough concentration on genetics. Can you arrange facilities, credits etc. for this? Any such students would probably have to spend at least half time on this program: i.e., they probably could not be registered for any other courses outside microbiology. (I know this may be academically disruptive; I also know that as an undergraduate or first-year graduate I might have been delighted to make such an intimate contact with a visiting professor in a field where I had a latent interest.)

(\*This is just a passing thought, to be taken lightly. I had in mind that we might organize a contrived controversy, the degenerate-parasite vs. the escaped-gene theories.)

We are just now packing; we fly direct to Paris from Chicago tomorrow. As this is our first trip to Europe, and sort of a warmup for the summer, all is chaos.

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We have to plan our itinerary directly we return. We hope to have heard from you about schedule. Can you also advise on following:

1) stopover Auckland en route. 2) pleasurable of a few days by sea-- how about Sydney--Fiji that way? climatic considerations? How about Brisbane or Cairns as a port: is that possible? The idea of a lazy South Seas excursion is becoming more appealing to us than a strenuous trans-global, for our one-month vacation. As things look now, and you can imagine, we may need such a diversion.

Yours,

P.S. We trust you have a good EMS mix, e.g. for EMS calactose. If not, please notify.

*John*